

What is claimed is:

1. A method for connecting an external electrical conductor to a porcelain enameled metal substrate electrical circuit device comprising:

5 (a) providing a porcelain enameled metal substrate having an aperture formed therein;

(b) inserting a hollow mechanical fastener through the aperture;

10 (c) mechanically fastening the fastener to the metal substrate so as to form an eyelet;

(d) inserting the external electrical conductor into the eyelet;

(e) applying solder to the external electrical conductor and the eyelet.

2. The method in claim 1 wherein the external electrical conductor is a wire.

3. The method in claim 2 wherein the eyelet is comprised of brass.

4. The method in claim 3 wherein the eyelet is electrically connected to a conductor on at least one surface of the electrical circuit device.

5. The method in claim 4 wherein the eyelet is soldered to at least one surface of the electrical circuit device.

6. The method in claim 1 wherein the external electrical conductor is a lead to an electronic component.

7. The method in claim 6 wherein the eyelet is comprised of brass.

20 8. The method in claim 7 wherein the eyelet is electrically connected to a conductor on at least one surface of the electrical circuit device.

9. The method in claim 8 wherein the eyelet is soldered to at least one surface of the electrical circuit device.

10. A method as set forth in claim 1 wherein said step (c) of mechanically fastening the fastener to the metal substrate comprises crimping the fastener to the metal substrate.

11. A circuit device comprised of a porcelain enameled metal substrate having a conductive circuit formed thereon and an external electrical conductor attached thereto comprising 5 a metal base coated with porcelain enamel and an aperture formed in said base, said aperture having mounted thereon a fastener, said electrical conductor being soldered to said fastener.

12. A circuit device as set forth in claim 11 wherein said external electrical conductor comprises a length of flexible copper wire.

13. A circuit device as set forth in claim 11 wherein said fastener is mechanically crimped 10 to said metal substrate.

14. A circuit device as set forth in claim 11 wherein said fastener is electrically insulated from said metal substrate.

15. A circuit device as set forth in claim 11 wherein said metal substrate comprises low 15 carbon steel.

16. A circuit device as set forth in claim 11 wherein said fastener is electrically connected to said conductive circuit.

17. A circuit device as set forth in claim 11 wherein said porcelain enamel metal substrate includes two major surfaces, and said conductive circuit is formed on both of said major surfaces.

18. A circuit device comprised of a porcelain enameled metal substrate having a 20 conductive circuit formed on each side of said substrate comprising a metal base coated with porcelain enamel and an aperture formed in said base, said aperture having mounted therein a fastener, said fastener electrically connecting said conductive circuits formed on each side of said substrate.